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Amdt. Dated Dec. 28, 2004
Reply to Office Action of Jul. 30, 2004

REMARKS

The present invention of the amended claims is a method for manufacturing essentially a three component iron club head. The three components include the face plate, the periphery member and the central member. The face plate is composed of a titanium alloy material. The periphery member is composed of a high density alloy to provide a greater moment of inertia for the club head. The central member is composed of a non-metal material. The manufacturing of an iron club head composed of these components is not disclosed by the prior art.

Claims 1-3, 7 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi in view of Sata and Chen. Claims 8-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi in view of Sata, Chen and Jensen.

Nakanishi, U.S. Patent Number 4,964,640 discloses using a cast or single piece body (1) with a fiber reinforcement (5) placed within a recess to create an iron club head. The manufacturing the iron club head, as shown in FIGS. 7-9 of the Nakanishi patent, is discussed in column 3, lines 34-43:

"One example of the process for producing such an iron club head is shown in FIGS. 7 to 9. First, a head main body 1 is fixed on a table (not shown) with its shooting face 2 on the underside as shown in FIG. 7. Next, a **crude fiber reinforcement 11** is deposited on the bottom 4a of the recess 4 and **urged to fill the overhang or overhangs 9** as shown in FIG. 8. A presser 12 having a convex head 12a is applied to the exposed face of the crude fiber reinforcement 11 as shown in FIG. 9 to form the concave outer surface 52 shown in FIG. 6."

The manufacturing process disclosed in Nakanishi is dissimilar from the method of the amended claims. Further, the iron club head of Nakanishi requires an undercut (9)

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to lock the fiber reinforcement material within the recess (4). Nakanishi does not disclose how to form an undercut (9) in an iron body with a separate face plate. Further, Nakanishi does not suggest dissimilar materials for the face plate and the periphery of the body as claimed in the amended claims. This is supported by the iron club heads depicted in FIGS. 1 and 3 of Sata, U.S. Patent 5,176,384.

Sata discloses an iron club head with a face plate attached to a body. However, Sata does not have the undercuts (9) which are disclosed in the iron club head of Nakanishi. Further, Sata teaches away from using a central member or fiber reinforcement.

“As is apparent from the above description, according to present invention, an impact surface portion of a head body is made of a thin plate consisting of a thermoelastic type martensite transformation alloy, and its thickness is set in the range of 1.0 to 5.0 mm so as to be smaller than that of each of the blade and sole portions of the head body. Since the impact surface portion is made of a thin plate consisting of a thermoelastic type martensite transformation alloy, **super elastic behavior upon rebounding of a ball due to flexibility based on a stress-induced martensite caused upon impact can be efficiently utilized**, thereby providing an iron type golf club head capable of improving directional stability upon impact and increasing the carry.” See Col. 4, lns. 15-29.

Sata is attempting to induce flexing of the face plate during impact with a golf ball. A central member or fiber reinforcement would defeat this purpose.

Both Chen patents and Jensen fail to provide the missing elements of Nakanishi and Sata.

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Thus, the prior art fails to disclose the invention of the amended claims. Applicant therefore respectfully solicits a Notice of Allowance.

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Respectfully submitted,



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